REMARKS

Applicant is in receipt of the Office Action mailed November 18, 2005. Claims 89 and 90 have been amended. Therefore, claims 71-104 remain pending in this case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Section 102 Rejections

Claims 71-104 were rejected under 35 U.S.C. 102(a) as being anticipated by Chin et al., "Model Based Recognition in Robot Vision", ACM Computing Surveys, vol. 18, no.1, March 1986, pg. 67-108 ("Chin").

Applicant respectfully reminds the Examiner that anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Regarding claim 71, Chin fails to disclose **a computer-readable memory medium that stores program instructions for creating a prototype for performing a machine vision process to solve a machine vision problem, wherein the program instructions are computer executable to perform displaying information indicating a plurality of machine vision problems**. Regarding this feature, the Examiner cites page 67, columns 1-2, which recite:

> INTRODUCTION
> Research and development in computer vision has increased dramatically over the last thirty years. Application areas that have been extensively studied include character recognition, medical diagnosis, target detection, and remote sensing. Recently, machine vision for automating the manufacturing process has received considerable attention with the growing interest in robotics. Although some commercial vision systems for robotics and industrial automation do exist, their capabilities are still very primitive. One reason for this slow progress is that many

> manufacturing tasks require sophisticated visual interpretation, yet demand low cost and high speed, accuracy, and flexibility.

More specifically, the Examiner referred to the portion, "although some commercial vision systems for robotics and industrial automation do exist", to provide this feature of claim 71. However, Applicant respectfully submits that this portion, as labeled in Chin, is an introduction of the topics that are described in the reference, and does not disclose or indicate the methods by which machine vision processes may be solved. Applicant respectfully submits that the cited portion nowhere discloses or mentions *a computer-readable memory medium that stores program instructions for creating a prototype for performing a machine vision process to solve a machine vision problem, wherein the program instructions are computer executable to perform displaying information indicating a plurality of machine vision problems.* Thus, for at least the reasons provided above, Applicant submits that Chin fails to disclose this feature of claim 71.

With further regard to claim 71, Chin fails to disclose **receiving user input selecting a machine vision problem from the plurality of machine vision problems.** With regard to this feature of claim 71, the Examiner cited page 75, column 1, section 3.1.1, which recites:

> *Model.* The SRI Vision Module [Gleason and Agin 1979] is the prototypical system of the global feature method. The user interactively selects a set of global features which are used to construct an object model as a feature vector. This process is an example of the "training by showing" method of modeling. For each distinct viewpoint of each object modeled, a sample prototype is used to compute the values of each feature selected. The selection of which features are sufficient to discriminate adequately among objects is determined by trial and error. Thus, if a new object is introduced later into the system, the complete process of feature selection must be repeated in order to discriminate properly among all of the possible objects in a scene.

Thus, the cited paragraph teaches a method for training a model by interactively selecting global features. Applicant respectfully submits that the cited paragraph is not

pertinent to this feature of claim 71. One skilled in the art of vision machine systems understands that the user *interactively* selecting a set of *global features* which are used to construct an object model as a feature vector is not *receiving user input selecting* ***a machine vision problem from a plurality of machine vision problems***. For at least the reasons provided above, Applicant respectfully submits that Chin fails to disclose this feature of claim 71.

Furthermore, Applicant submits that Chin fails to disclose **automatically creating a prototype in response to the selected machine vision problem, wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions**. Regarding this feature of claim 71, the Examiner cites page 75, column 2, which recites:

> *Matching*. Matching uses a decision-tree method based on the list of global features associated with each model [Agin and Duda, 1975]. The tree is automatically constructed from the models as follows. (1) The feature values with the largest separation for a given feature and pair of object models are found, and this feature is used to define the root node of the tree. That is, a threshold is selected for this feature that distinguishes between these two models. (2) Two children of the root node are constructed such that all models that have a feature value less than or equal to the threshold are associated with the left child; the right child is assigned all models with a feature value greater than the threshold. (3) This procedure is repeated recursively, dividing a set of model candidates associated with a node into two disjoint subsets associated with its two children. A terminal node in the tree is one that contains a single model.

Thus, the above paragraph describes a method for distinguishing between various models. As argued above, Chin fails to disclose receiving user input selecting a machine vision problem; therefore, Chin cannot teach *automatically creating a prototype in response to the selected machine vision problem*.

Furthermore, similar to above, Applicant also submits that the cited paragraph is not pertinent to this feature of claim 71. One skilled in the art of machine vision systems

understands that a decision-tree method for matching pre-defined objects based on the list of global features associated with each model is not *automatically creating a prototype in response to the selected machine vision problem*.

Similarly, Chin fails to disclose receiving user input selecting a machine vision problem, and, as argued above, cannot teach *wherein the prototype comprises information specifying a sequence of functions, wherein the information specifying the sequence of functions is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem*. In fact, Applicant notes that the cited paragraph fails to mention a sequence of functions at all.

Applicant further notes that, given a new object, i.e., a new problem, the above-cited paragraph (page 75, column 1) specifically states that the complete process of feature selection must be repeated in order to discriminate properly among all the possible objects in a scene. Thus, Applicant submits that Chin actually **teaches away** from *automatically creating a prototype in response to the selected machine vision problem, wherein said automatically creating is performed without direct user input selecting the functions*, because, in Chin, the user must train the Module, via the "training by showing" method each time a new object is introduced.

Thus, for at least the reasons provided above, Applicant submits that Chin fails to teach all the features and limitations of claim 71, and so Applicant submits that claim 71 and those claims dependent therefrom are patentably distinct and non-obvious over the cited art, and are thus allowable.

Claims 94, 101, 102, and 104 include similar limitations as claim 71, and so the above arguments apply with equal force to these claims. Thus, for at least the reasons provided above, Applicant submits that claims 94, 101, 102, and 104, and those claims respectively dependent therefrom, are patentably distinct and non-obvious, and are thus allowable.

For at least the reasons above, Applicant respectfully requests removal of the 102 rejection of claims 71-104.

Applicant also submits that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the rejection has been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-44800/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,

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